

Design and Development of Convertible Staircase Cum Ramp for Physical Disabled Persons

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Abstract: Generally, at many places there is no provision for disable people to climb the stairs with the help of this mechanized stairs the person will be able to do it. The objectives to transmute the staircase into ramp or platform, so that lame or disable people can make use of it. It is amalgamation of stairs and ramp so it can use alternately whenever needed, it is a type of portative stairs. Involvement of such mechanized things will help to reduce human work. The main rationale behind working on this topic is to reduce human effort in day-to-day life and vanquish the difficulties. The work is done to bring the conceptual idea into reality. The main concept of mechanized stairs is creating combination of stair and ramp by implementing mechanical linkages, different mechanism so that it can bemuse simultaneously as a stair or ramp as per use or need. As per contemplate there is a major predicament for disable people for climbing stairs so this idea was conceptualized by integrating with mechanical systems. By considering the concept, the fabrication was carried out to prepare the stairs by fulfilling three basic requirements economic viability, technical feasibility and social acceptance.

Keywords: Ergonomics, Convertible Stair Case, Ramp, disable people problem solving

